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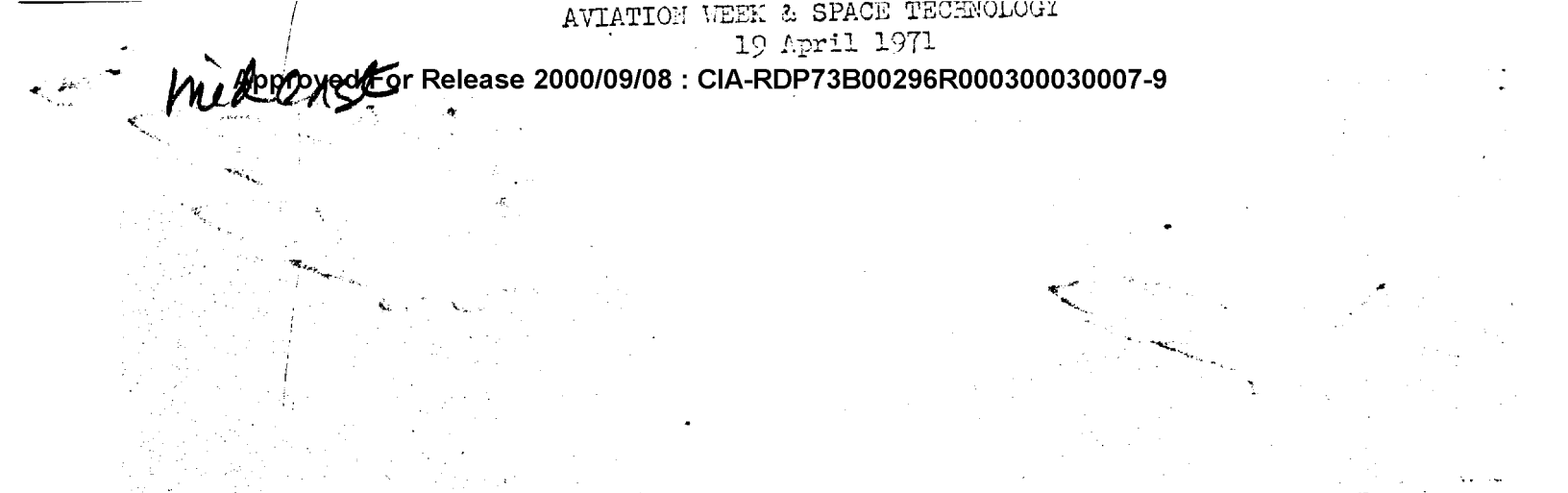

Formation of Russian Foxbat (MiG-23) Mach 3 interceptors of the type that have been airlifted by the An-22 to Egypt are shown in flight during an air show in Moscow. These are earlier prototypes of the MiG-23 which are longer and heavier than the production-line interceptor versions now being deployed in North Africa.

Soviets Spur Arms Flow to Egypt

Deployment of Foxbats, Ganef SAMs and new communications to Mideast seen effort to gain air superiority over Israel

By Edward H. Kolcum

Soviets are deploying Foxbat Mach 3 interceptors, Ganef anti-aircraft missiles and new communications systems to Egypt in a massive arms airlift spurring a new attempt to gain air superiority over the Arab-Israeli battle line from the Mediterranean to the Red Sea.

The new round of Soviet arms shipments also is aimed at plugging an air defense gap along the Suez Canal south of Ismailiya and along the Red Sea shoreline and increasing the strength of the already formidable missile, radar and anti-aircraft artillery belt in the northern canal zone opposite the Israeli Bar-Lev line on the west bank.

In an airlift that has taken on the characteristics of a regular shuttle between Russia and Egypt, the Soviets have delivered:

- A squadron of Mach 3.2 Foxbat fighters whose performance characteristics have been judged by Israel and the West to demonstrate a clear superiority over aircraft flown by Israelis.
- SA-4 Ganef surface-to-air missiles with an effective range up to 80,000 ft.
- Swamp, a ground-to-ground voice communications system, which links air defense fighter bases, missile batteries and gun emplacements.
- Markham, a ground-to-air digital transmission system, which enables tracking radars to feed data directly to the Foxbat cockpit display panel.

The new system is manned exclusively by Soviet personnel. It complements the heavy concentration of SA-2 Guideline and SA-3 Goa missiles along a 78-mi. band from Ismailiya to the city of Suez (AW&ST Nov. 16, 1970, p. 16).

Independent Israeli, U.S. and British intelligence estimates conclude that the Foxbat has no serious challenger in the Middle East. Below 15,000 ft., the lighter McDonnell Douglas F-4E flown by the Israelis could be a factor. But the judgment is that the Foxbat will never be caught below 15,000 ft.; rather it will rely on its superior dash speed for a tail chase from above.

The Foxbat is the interceptor version as differentiated from the standard MiG-23. The standard MiG-23 has a somewhat longer fuselage—80 ft. compared with 65 ft.—and a heavier gross weight—70,000 lb. compared with the 64,200 lb. of the Foxbat (see box p. 16). Analysts believe that Foxbat is the Soviet air force replacement for the MiG-21J, and the standard MiG-23 has had only limited production.

The new Soviet air defense package in Egypt is aimed at preventing a repetition of the humiliating battering Soviet pilots received last July 30 (AW&ST Nov. 16, 1970, p. 21), in which four MiG-21Js were knocked down in a dog-fight by F-4Es and Dassault Mirage 3CJs.

One factor in the Russian defeat last July was the ability of Israelis to monitor voice transmissions in Egypt—both ground-to-air and air-to-air. Swamp and Markham are extremely secure communications systems. Markham eliminates the need for any ground-to-air voice transmissions.

The Soviet air shuttle to Egypt has been functioning since January, and intelligence observers noted a significant restructuring of southern air defenses about six weeks ago. At least 60 landings have been made in Egypt in the past four months by the giant Antonov An-22 cargo transport. Several hundred sorties have been flown by the older An-12. The mobile Ganef missile is transportable in the An-22. Disassembled Foxbat fighters are also carried in the An-22.

Foxbat made its first flight in Egypt on Mar. 26 from Cairo West Airport. Through last week, a total of seven flights had been made, five of which were observed and analyzed. It is probable that the flights are acceptance checks after the aircraft have been assembled in Egypt.

Following are the performances

Foxbats in Algeria

Soviets have moved approximately 15 MiG-23 fighters and a squadron of 9-18 Sukhoi Su-7 ground attack aircraft into Algeria under terms of a new and hitherto secret military pact between the two countries.

Soviet pilots flying the aircraft have free access to Algerian air fields under the agreement, which basically covers the use of the former French naval base at Mers el Kebir. Two Soviet submarines are based there. The agreement runs through 1988.

The aircraft are being flown to Egypt in Antonov An-22 heavy cargo aircraft prior to being based in Algeria. The MiG-23s are assembled in Egypt by Soviet technicians and flown by Soviet crews on to Algeria.

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Map shows the new strategic picture in Egypt, with the triangular shaded area (B) indicating the path Foxbat Mach 3.2 fighters have taken on test flights from Cairo West Airport. Range of the Foxbat is 610 naut. mi., and the test circuit is approximately 500 statute mi. Shaded area (C) shows the area closed to unauthorized air traffic by Egypt in a Notam issued Apr. 6. Independent U.S., Israeli and British intelligence indicates that this sector will house the SA-4 Ganef air defense missile plus Swamp and Markham secure communications systems. Area A is previously installed SA-2, SA-3 missile belt.

achieved in the five flights observed between Mar. 26 and Apr. 7:

■ **First flight, Mar. 26**—Operation from sea level to 63,000 ft. at speeds averaging Mach 2.0. In a dash at 63,000 ft., the Foxbat reached a speed of Mach 3.2, which converts to 1,860 kt.

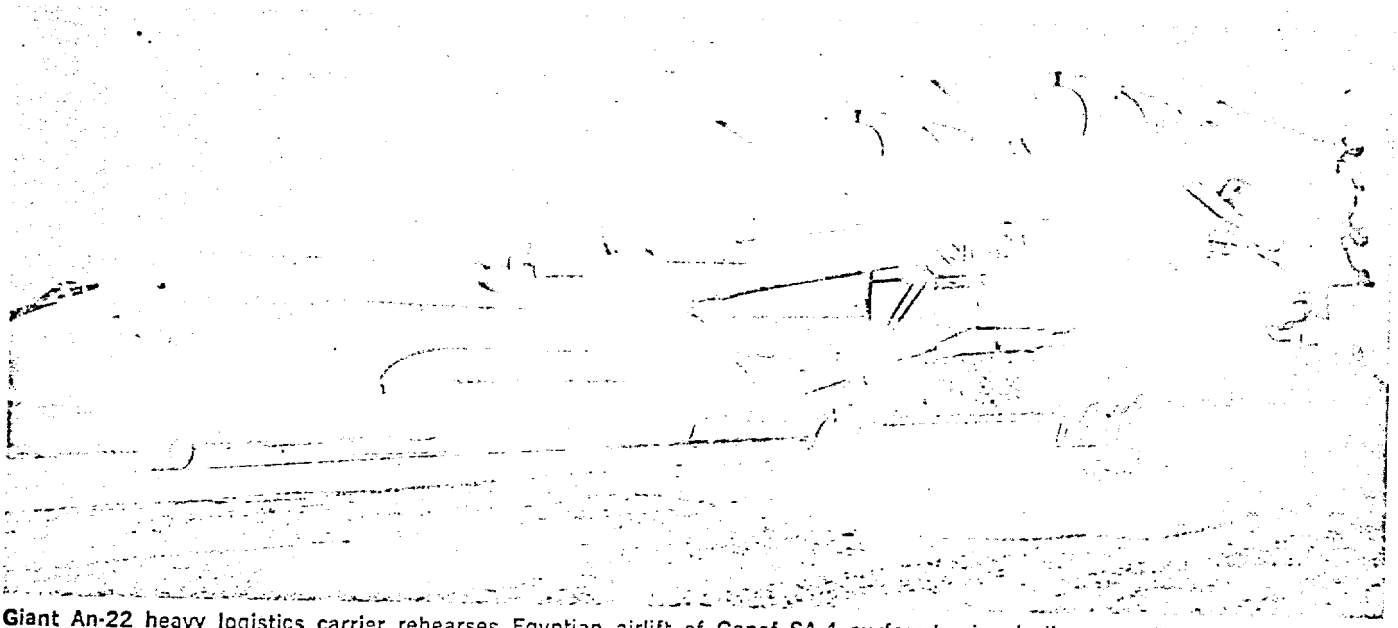
■ **Second flight, Apr. 1**—Tests ranging from sea level to 73,000 ft. Overall computed speed for this run was 1,100 kt., with top speed of 1,680 kt.

■ **Third flight, Apr. 4**—Same figures as Apr. 1.

■ **Fourth flight, Apr. 5**—Mock dogfights held against MiG-21J, with the Foxbat reaching a top speed of 1,100 kt.

■ **Fifth flight, Apr. 7**—Top speed of 1,600 kt. attained.

The test flights all follow a triangular path of approximately 500 mi. to the southwest of Cairo (see map, p. 15).



Giant An-22 heavy logistics carrier rehearses Egyptian airlift of Ganef SA-4 surface-to-air missiles on self-propelled launchers during earlier maneuvers in the Soviet Union. An-22 can carry two Ganef launchers with double-mounted missiles in its cargo bay. It has also delivered Frog-7 ground-to-ground missiles and self-propelled launchers to Egypt.

Meanwhile, on Apr. 6 Egypt issued a notice to airmen (Notam) closing a wide section of airspace to foreign aircraft. The area (see map) is along the northern Red Sea shoreline, and it is believed by intelligence sources that the ground environment is being established there for the SA-4 missile and Swamp and Markham communications systems. These same sources believe the Soviet airlift has concentrated exclusively on the new air defense system.

The number of MiG-21Js in Egypt is now about 112 as compared with 100 a year ago (AW&ST May 11, 1970, p. 18). Another dozen Sukhoi Su-7s also are believed to have been delivered to Egypt during the past year.

From the political standpoint, it has become obvious that Russia with its new shipments is digging into Egyptian territory, and the theory persists that the Soviet goal is control of the Suez Canal and the Red Sea approaches.

In addition, the growing Russian military presence in Algeria is viewed as a further step at entrenchment in the North African littoral.

Speculation that the Soviet shipments are a response to the Israeli stand on peace negotiations is discounted by Israeli and most U.S. observers in the Middle East. They point out that the decision to install the new system was taken last August following the visit by a Russian air marshal to Cairo after the four MiG-21Js were shot down.

Reconnaissance IL-18

Military version of the Ilyushin Il-18 commercial transport is being used over the Mediterranean as a shipping reconnaissance patrol aircraft.

A flight of these aircraft, codenamed May, which carry the designation Il-38, is based at Matru field near Cairo.

continued

Foxbat Characteristics Observed

Mikoyan Foxbat MiG-23 fighter now being flown by Soviet pilots in Egypt is thought to have same speed characteristics as Lockheed SR-71 strategic reconnaissance aircraft. It has been observed by Israeli, U.S. and British intelligence flying at a dash speed of Mach 3.2 and a maximum altitude of 73,000 ft.

Based on analyses resulting from these observations, Foxbat has these basic design and performance specifications:

- Maximum gross takeoff weight—64,200 lb.
- Operating weight empty—34,000 lb.
- Useful load—30,200 lb., of which 25,000 lb. is fuel.
- Wing span—44 ft.
- Wing leading edge sweep—inboard, 42 deg.; outboard, 38 deg.
- Wing area—640 sq. ft.
- Wing loading—100 psf.
- Fuselage length—65 ft.
- Fuselage width—9.2 ft.
- Fuselage depth—8.7 ft.
- Maximum power rating—24,200 lb. sea level static thrust.
- Time to climb—sea level to 36,000 ft., with afterburner, 2.5 min.; on full military power, 7.8 min.
- Combat radius—610 naut. mi. for a normal mission. The radius actually varies from 400-700 naut. mi. depending on duration of supersonic flight.

Foxbat can be armed with air-to-air missiles, rockets and bombs. Its primary mission in Egypt is air superiority, but it can be adapted for reconnaissance and fighter-bomber roles.